

REMARKS

The application has been reviewed in light of the Office Action mailed on August 11, 2004. Claims 3, 45 and 47 have been amended without adding new matter. Reconsideration of the pending claims is respectfully requested in light of the following.

Claim 47 is objected to due to informalities. Applicants thank the Examiner for the careful reading of the claims. Claim 47 has been amended as suggested.

Claims 3-8, 20, 24, 45-47, 51, 52 and 55-61 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Soltys et al., U.S. Patent No. 6,460,848 (hereinafter "Soltys"), in view of Soules et al., U.S. Patent No. 5,169,155 (hereinafter "Soules"). Reconsideration is respectfully requested in light of the amendments made to the claims and the following reasons.

The invention relates to a card stack reader which reads an image from a stack of cards, and a card used in the card stack reader. The Applicants' specification discloses cards having a read code printed on a peripheral side edge, and that the cards can be grouped as a stack of cards. When the peripheral side of the card, or stack of cards, is irradiated with light, the peripheral side of the card stack is fully enclosed in a housing of a card stack reader. See, for example, Figure 4 and associated text of the specification. The peripheral side of the card stack faces an image sensor perpendicularly so that the reflection light, indicating a part of game data, is generated. See, for example: page 12, line 5 through page 13, line 8; page 34, lines 3-25; and associated Figures of the specification. According to the present invention, the imaging unit can receive a stable reflection light from the card stack, with a fixed level of light from a flash lamp, without being affected by the brightness of the surrounding environment.

Amended claim 3 recites a "card for use with a card stack reader which includes: a housing ...; a card holder which holds the stack of cards in an aligned condition; a light irradiation unit which irradiates a peripheral side portion of the stack of cards ... with light so that a reflection light indicating the read code of each card is generated ...; [and] an

imaging unit which receives the reflection light from the peripheral side portion of the stack in a direction perpendicular to the peripheral side edge of each card.” Amended claim 3 further recites that “the read code is recorded along the peripheral side edge of the card, ... and, when the peripheral side edge of the card is irradiated by the light irradiation unit to read the image signal, the peripheral side portion of the card stack is fully enclosed in the housing and faces the imaging unit so that a reflection light indicating the read code is generated.”

The cited references, taken alone or in combination, fail to teach or suggest these claim limitations. Soltys teaches a card deck reader in which a code is recorded along a front corner of the card. When the front corner of the card is captured by a CCD camera, the code is generated. According to Soltys, the cards in the stack of cards are arranged in a slantingly deviated position during the optical reading. The CCD camera is arranged to face the front corner of the card stack, as shown in Figure 8. Soules teaches a light irradiation unit using an infrared or ultraviolet light source. The Soules unit reads data from a front surface of a card.

Neither Soltys nor Soules, taken alone or in combination, teaches or suggests “an imaging unit which receives the reflection light from the peripheral side portion of the stack in a direction perpendicular to the peripheral side edge of each card.” As evident from Figure 8 and associated text of Soltys, its reader is positioned such that it reads a portion of the front face of each card. Soltys’ reader is not even exposed to the “peripheral side portion” of the stack of cards, let alone “in a direction perpendicular to the peripheral side edge of each card.” Soules adds nothing to remedy this deficiency. For at least this reason, amended claim 3 is allowable over the cited art.

Moreover, Applicants disagree with the Office Action’s assertion that the references are properly combinable. The Office Action admits that “Soltys lacks in [teaching] irradiating the cards with light.” Office Action, page 4. For this deficiency it relies on Soules’ disclosure of an “infrared or ultraviolet source and matching detector” (col. 8, ll. 13-15) for reading images on cards, and asserts that “it would have been obvious

to implement the cards with fluorescent codes in Soules into the invention of Soltys.” Id. at 5.

Applicants disagree because the teachings of Soltys and Soules are incompatible with one another. Soltys’ system requires that the card-identifying information be contained close to a front corner of each card, such that when the card deck is tilted, the information containing corner of each card is exposed to the reader. “The card reader 82 is thus capable of reading information from every card in the deck 18 in the order the cards are positioned in the deck 18, before any cards are removed.” Col. 7, l. 65 – col. 8, l. 1; emphasis added. In Soules’ system, the infrared or ultraviolet source requires that the entire card is scanned to determine its characteristics. According to Soules, “[t]he card 20 (Fig. 2) will be read when passed across the reading means in any orientation, requiring only that two opposed edges of the rectangular card traverse the reading means.” Col. 10, ll. 14-17 (emphasis added). In other words, Soules’ system requires that an entire card is scanned, and does not allow for plurality of cards to be scanned when the cards are stacked in a deck.

Thus, to implement Soules’ system into Soltys would not allow Soltys to read the entire deck before moving the cards, which is a main purpose of Soltys, and would render Soltys unfit for its intended use. The proposed combination of references is, therefore, improper, and this is an additional reason why claim 3 is allowable.

Claims 4-8, 20 and 24 depend from claim 3 and contain every limitation of claim 3. Claims 4-8, 20 and 24 are allowable for at least the same reasons for allowance for of claim 3, and also because the unique combinations recited in these dependent claims are neither taught nor suggested by the cited references.

Independent claim 45 has been amended to recite a “card for use with a game machine in which a stack of cards, containing the card, is inserted into the game machine, ... the game machine comprising a code reader which ... irradiat[es] a portion of the peripheral side of the stack of cards where the codes are recorded, with light.” Claim 45

further recites “an imaging unit receiving a reflection light from the peripheral side of the card stack in a direction perpendicular to the peripheral side of the card stack, ... wherein, when the peripheral side of the card is irradiated with light to read the image signal, the peripheral side of the card stack is fully enclosed in the housing and faces the imaging unit so that the reflection light indicating the part of the game data is generated.”

For at least the reasons discussed above with respect to claim 3, claim 45 is allowable over Soltys and Soules, taken alone or in combination. Claims 46, 47, 51, 52 and 55-61 depend from claim 45 and contain every limitation of claim 45. These dependent claims should be allowed at least based on the reasons for allowance of claim 45, and for other reasons.

Claims 18, 19, 30, 31, 48-50, 53 and 54 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Soltys and Soules, and further in view of Cuff et al., U.S. Patent No. 4,534,562 (hereinafter “Cuff”). This rejection is respectfully traversed for the following reasons.

Claims 18, 19, 30 and 31 depend from claim 3, and claims 48-50, 53 and 54 depend from claim 45. As discussed above, amended claims 3 and 45 are allowable over the (improper) combination of Soltys and Soules. Cuff teaches reading a front and back of a card, but adds nothing to remedy the above-discussed deficiencies of Soltys and Soules with respect to claims 3 and 45. Claims 18, 19, 30, 31, 48-50, 53 and 54 are therefore allowable for at least the reasons for allowance of their base claims.

Application No.: 09/890,663

Docket No.: I9770.0009/P009

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Dated: January 11, 2005

Respectfully submitted,

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